

5/43

DART AEROSPACE LTD	Work Order:	2444 1
Description: Fwd Tube Assembly	Part Number:	D3391-021
Dwg: D3391 Rev. <u>Q</u>	Qty:	2
Page 1 of 1		

Step	Location	Procedure	By	Date	Qty
1	DC	Issue Traveler	JL	05.10.18	2
2	MM	Machine as per Folio FA590 Rev. ____ & Dwg D3391 Rev. ____ Pick: Qty Part Number Description Batch 1 D6013-047 Extrusion 1323935 Identify as D3391-1	JL JL JL	05.11.11 05.11.09 05/10/20	2 4 2
3	QC2	Inspect parts as they come off the machine	JL JL	05.11.09 05/10/20	4 2
4	QC8	Second check	JL JL	05/11/09 05/10/20	4 2
5	MM	Deburr	JL JL	05.11.09 05/10/20	4 2
6	GB	Form as per Dwg D3391	JL	05.11.15	2
7	QC5	Inspect work to Step 6	JL	05.11.15	2
8	LG	Drill and c'sink float bag holes as per Dwg D3391 using DT8798	JL	05.11.15	2
9	LG	Drill wearplate holes as per Dwg D3391	JL	05.11.15	2
10	LG	Deburr	JL	05.11.15	2
11	QC5	Inspect work to Step 9	JL	05.11.15	2
12	FP	Acid etch and Alodine as per QSI 005 4.1	JL	05.11.15	2
13	FP	Powder Coat Gloss White (Ref: 4.3.5.1) as per QSI 005 4.1	JL	05.11.15	2
14	QC3	Inspect Powder Coat	JL	05.11.15	2
15	LG	Install inserts and Tow Cap as per Dwg D3391 Pick: Qty Part Number Description Batch 1 D3401-041 Tow Cap 1324457 4 AN3C4A Bolt 117561 24 NAS1330C3KB166 Insert 118306 4 NAS1515H2 Washer 117944 Identify as D3391	JL	05.11.15	2
16	QC5	Inspect work to	JL	05.11.15	2
17	ST	Identify and Sto	JL	05.11.15	2
18	AC	Cost / part:			
19	DC	Close W/O Inspect Level 2			

Rev	Date	Change	Revised By	Approved
A	05.09.13	New issue	KJ/JLM	

Change will swap to 1001-536

PTO

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector	
05/11/15	15	IPP does not follow drawing change qty 4 IVAS1515H3 to 4 IVAS1515H3L M17450 + 4 AN960C10L M18822 Permanent Change				VB 05/11/15	VB 05/11/15	

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			
05/10/20	2	two (2) parts scrap - one part squashed - one part to low of m offset (first run)	VB 05/10/20	Scrap and Replace and destroy.		VB 05-10-20	VB 05/10/20	VB 05-10-20
05/11/07	6	2 scrap cracked while bending	VB 05/11/07	Scrap & replace make 4 total		VB 05-11-07	VB 05/11/07	VB 05-11-07
05/11/10	6	4 scrap while bending	VB 05/11/10	Replace with two		VB 05-11-10	VB 05/11/10	VB 05-11-10

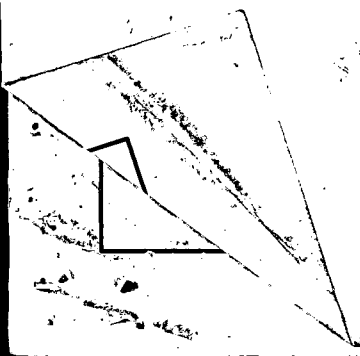
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____

Date: _____

NOTE: Date & initial all entries

QA: N/C Closed: _____

Date: _____



DART AEROSPACE LTD		Work Order: 24441
Description: 412 Float Skid tube		Part Number: 3391-021
Inspection Dwg: D3391 Rev: C		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

	Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
DD	0.684	+0.010 -0.000	0.689	-			
	3.580	±0.010	3.576	-			
CL	3.300	±0.016	3.307	✓			
	1.429	±0.016	1.427				
	4.250	±0.010	4.259	✓			
222	0.188	±0.016	0.188	-		R.C.	
	4.250	±0.010	4.247	✓			
	0.187	±0.010	0.188	-		R.C.	
EEF	3.756	+0.005 -0.000	3.750	-			outside Dia for mat.
	3.460	+0.005 -0.000	3.460	-			inside Dia for mat.
	46.49	±0.030	46.514	-		Tape Measure.	
	7.000	±0.010	6.996	-			
	5.250	±0.010	5.248	-			
FF	1.750	±0.010	1.748	-			
	1.50	±0.010	1.499	-			
	0.438	+0.005 -0.001	0.439	-			
	R 0.063	±0.016	0.063	✓		R.C.	
	0.500	±0.010	0.528	✓	✓		
	0.208	+0.005 -0.000	0.208	-			
	0.640	+0.008 -0.001	0.641	-			
	0.250	+0.005 -0.001	0.250	-			

Measured by: <i>En</i>	Audited by: <i>gml</i>	Prototype Approval: <i>PH</i>
Date: 05/10/20	Date: 05/10/20	Date: 05.10.20

Rev	Date	Change	Revised by	Approved
A		New Issue	KJ/RF	

cheloide

Job Costing Report

Dart Aerospace Ltd.
Hawkesbury

Oct 05, 2005
10:49 am

Work Order No : 0024441
Project Name : D3391-021
Project For : WK543
Work Order Type : Main
Main WO Number :
House Part Number : D3391-021
Description : Fwd Tube Assembly
Manufactured : Yes
Amount Req'd : 2
Amount Done : 0
Start Date : 10-05-05
Est Finish Date : 10-28-05
Act Finish Date :
Drawings Req'd : No
Ok for Approval :
Approval Rec'd :

Department Code:
Burden Flags : NNNNNNNN
WO Status : Open
Invoice State : Not Invoiced
Invoice Date :
Invoice Number :
Invoice Amount : 0.00

Order Entry No :
OE Value : 0.00

Est Mark Up : 0.000%
Actual Mark Up : 0.000%

\$0 Posted to Finished Goods

	Estimated	Actual	Var. %	Posted	To Post
Material Cost :	0.00	0.00	0.00	0.00	0.00
Engineering Hours :	0.00	0.00	0.00		
Engineering Cost :	0.00	0.00	0.00	0.00	0.00
Production Hours :	0.00	0.00	0.00		
Production Cost :	0.00	0.00	0.00	0.00	0.00
Packaging Hours :	0.00	0.00	0.00		
Packaging Cost :	0.00	0.00	0.00	0.00	0.00
OverHead Hours :	0.00	0.00	0.00		
OverHead Cost :	0.00	0.00	0.00	0.00	0.00
CNC Hours :	0.00	0.00	0.00		
CNC :	0.00	0.00	0.00	0.00	0.00
Misc. Hours :	0.00	0.00	0.00		
Misc. :	0.00	0.00	0.00	0.00	0.00
Burden :	0.00	0.00	0.00		
Total Cost :	0.00	0.00	0.00		
Mark up :	0.000	0.000			
Selling Cost :	0.00	0.00			

	Estimated	Actual
Labour Hrs/Amount Done :	0.00	0.00
Profits/(Loss) :	0.00	0.00

Job Costing Report

Dart Aerospace Ltd.
Hawkesbury

Nov 08, 2005
12:10 pm

Work Order No : 0024441
Project Name : D3391-021
Project For : WK543
Work Order Type : Main
Main WO Number :
House Part Number : D3391-021
Description : Fwd Tube Assembly
Manufactured : Yes
Amount Req'd : 2
Amount Done : 0
Start Date : 10-05-05
Est Finish Date : 10-28-05
Act Finish Date :
Drawings Req'd : No
Ok for Approval :
Approval Rec'd :

Department Code:
Burden Flags : NNNNNNNN
WO Status : Open
Invoice State : Not Invoiced
Invoice Date :
Invoice Number :
Invoice Amount : 0.00
Order Entry No :
OE Value : 0.00
Est Margin : 0.000%
Actual Margin : 0.000%
\$0 Posted to Finished Goods

	Estimated	Actual	Var. %	Posted	To Post
Material Cost	0.00	0.00	0.00	0.00	0.00
Engineering Hours	0.00	0.00	0.00		
Engineering Cost	0.00	0.00	0.00	0.00	0.00
Production Hours	0.00	19.75	100.00		
Production Cost	0.00	442.05	100.00	0.00	442.05
Packaging Hours	0.00	0.00	0.00		
Packaging Cost	0.00	0.00	0.00	0.00	0.00
OverHead Hours	0.00	0.00	0.00		
OverHead Cost	0.00	0.00	0.00	0.00	0.00
CNC Hours	0.00	17.75	100.00		
CNC	0.00	0.00	0.00	0.00	0.00
Misc. Hours	0.00	0.00	0.00		
Misc.	0.00	0.00	0.00	0.00	0.00
Burden	0.00	0.00	0.00		
Total Cost	0.00	442.05	100.00		
Margin	0.000	0.000			
Selling Cost	0.00	442.05			

	Estimated	Actual
Labour Hrs/Amount Done	0.00	0.00
Profits/(Loss)	0.00	(-442.05)

MIS 01B
u
11.13

Date: Monday, 14/11/2005 8:26:59 AM
 User: Alba Panzuto

Process Sheet

Customer :	CU-DAR001 Dart Helicopters Services	Drawing Name :	FWD TUBE ASSEMBLY
Job Number :	24441		
Estimate Number :	10467		
P.O. Number :		Part Number :	D3391021
This Issue :	14/11/2005	S.O. No. :	
Prsht Rev. :	NC	Drawing Number :	D3391 REV B
First Issue :	/ /	Project Number :	
Previous Run :		Drawing Revision :	B
	Type :	Material :	
	MACHINED PARTS	Due Date :	20/11/2005
Written By :		Qty:	2
Checked & Approved By :		Um:	Each
Comment :	Est. A 05.09.13 New issue KJ/JLM		

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	D6013047	SKIDTUBE MAT'L
-----	----------	----------------

2.0	LATHE CONV.	CONVENTIONAL LATHE
-----	-------------	--------------------

**Comment:** CONVENTIONAL LATHE

Machine as per Folio FA590 Rev. ____ & Dwg D3391 Rev. ____

Identify as D3391-1

Debur

3.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE
-----	-----	--

**Comment:** INSPECT PARTS AS THEY COME OFF MACHINE

4.0	QC8	SECOND CHECK
-----	-----	--------------

**Comment:** SECOND CHECK

5.0	BRAKE NC	NC BRAKE
-----	----------	----------

**Comment:** NC BRAKE

Form as per Dwg D3391

6.0	QC5	INSPECT WORK TO CURRENT STEP
-----	-----	------------------------------

**Comment:** INSPECT WORK TO CURRENT STEP

7.0	LANDING GEAR 1	LANDING GEAR RESOURCE 1
-----	----------------	-------------------------

**Comment:** LANDING GEAR RESOURCE 1

Drill and c/sink float bag holes as per Dwg D3391 using DT8798

Drill wearplate holes as per Dwg D3391

Debur

Date: Monday, 14/11/2005 8:26:59 AM
User: Alba Panzuto

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: FWD TUBE ASSEMBLY

Job Number: 24441

Part Number: D3391021

Job Number:



Seq. #:	Machine Or Operation:	Description :
---------	-----------------------	---------------

8.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Acid etch and Alodine as per QSI 005 4.1

9.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

10.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

11.0

D3401041

Tow Cap Assembly

12.0

AN3C4A

Bolt

13.0

NAS1330C3KB166

Rivnut

14.0

NAS1515H3

Washer

15.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

Install inserts and Tow Cap as per Dwg D3391

Identify as D3391-021

16.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

17.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: _____

18.0

DC

DOCUMENT CONTROL



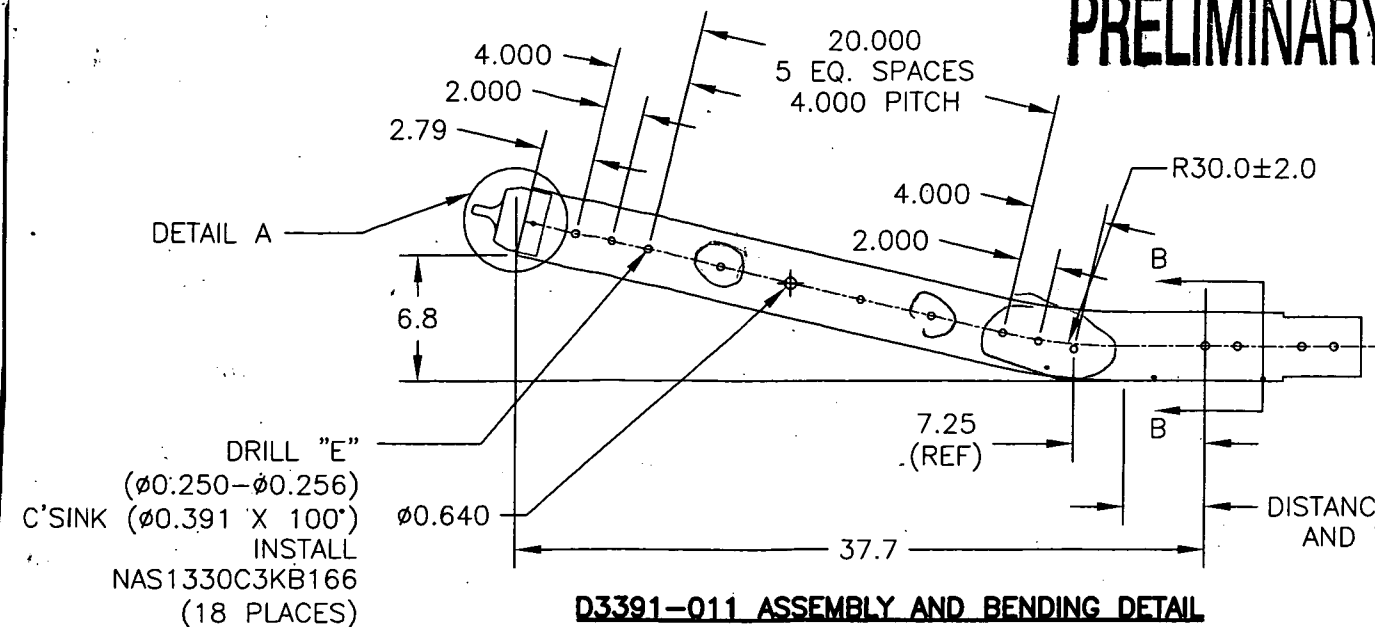
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Inspection Level 21

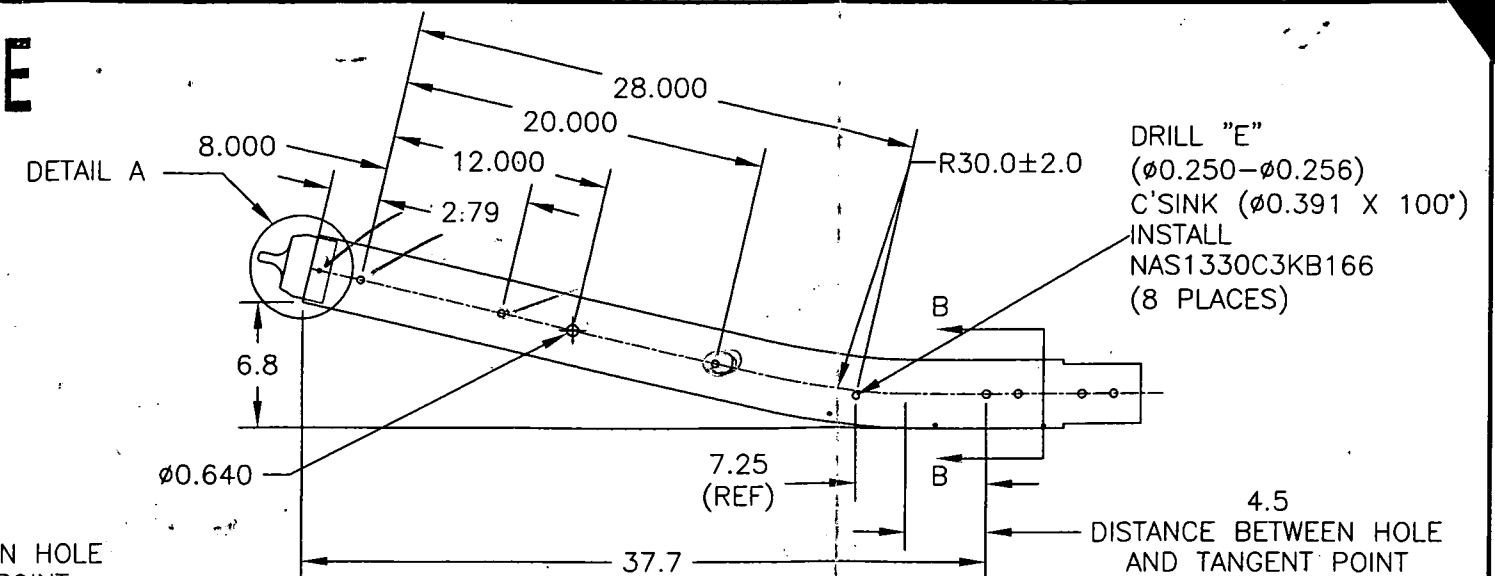
Job Completion



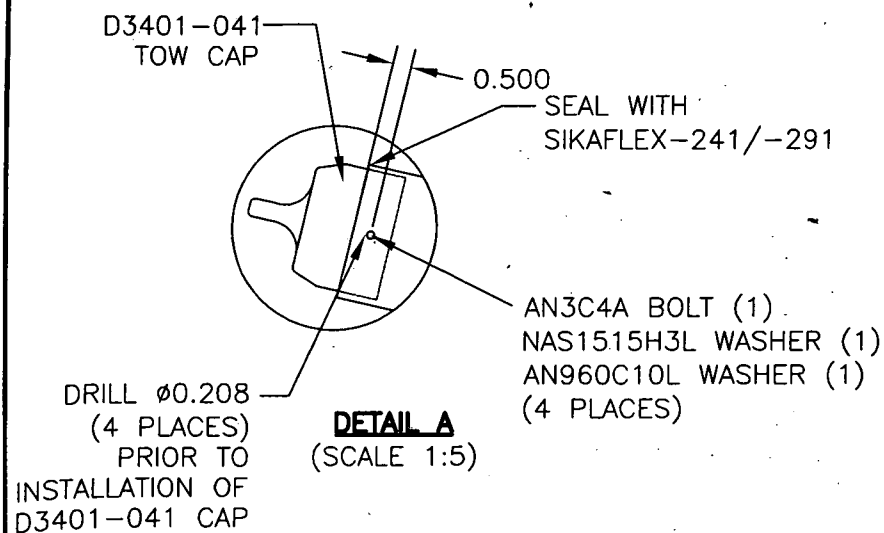
PRELIMINARY ISSUE



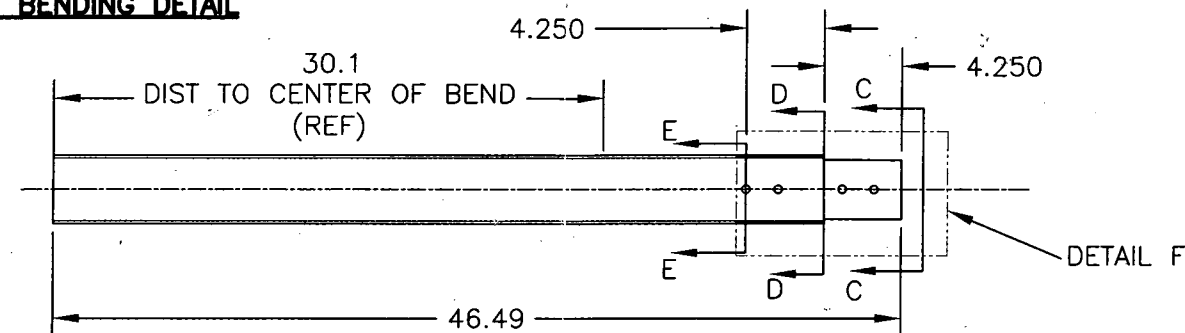
D3391-011 ASSEMBLY AND BENDING DETAIL



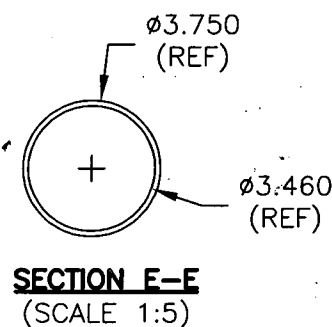
D3391-021 ASSEMBLY AND BENDING DETAIL



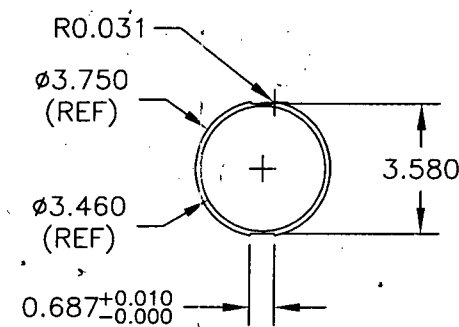
DETAIL A
(SCALE 1:5)



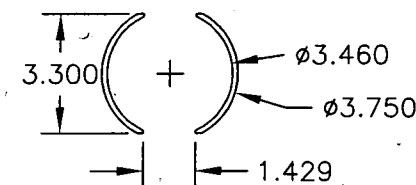
D3391-1 DRILLING AND CUTTING DETAIL
(MAKE FROM D6013-047 SKIDTUBE MATERIAL)



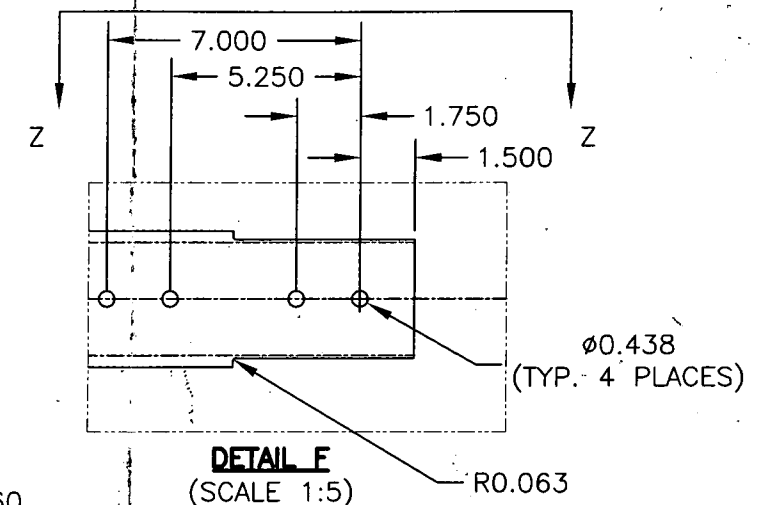
SECTION E-E
(SCALE 1:5)



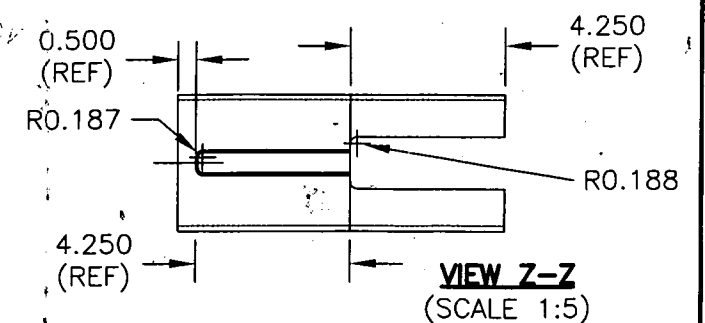
SECTION D-D
(SCALE 1:5)



SECTION C-C
(SCALE 1:5)



DETAIL F
(SCALE 1:5)



VIEW Z-Z
(SCALE 1:5)

D3391-011/-021 FWD TUBE ASSEMBLY PARTS LIST

QTY - 011	QTY - 021	PART NUMBER	SHOP COPY	DESCRIPTION
X		D3391-011	RETURN TO ENGINEERING	FWD TUBE ASSEMBLY
	X	D3391-021	1 FOLDED COPY	FWD TUBE ASSEMBLY
1	1	D6013-047	1 FOLDED COPY	FWD TUBE
1	1	D3401-041	1 FOLDED COPY	TOW CAP
4	4	AN3C4A	WORK ORDER	BOLT
4	4	NAS1515H3L	NO. 2444	WASHER
4	4	AN960C10L		WASHER
24	14	NAS1330C3KB166		INSERT

5 DRILL "E"
(Ø0.250-Ø0.256)
C'SINK (Ø0.391 X 100')
INSTALL
NAS1330C3KB166
(6 PLACES)

SECTION B-B
(SCALE 1:5)

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DESIGN PH	DRAWN BY PH	DART DART AEROSPACE USA, INC. PORT HADLOCK, WA
CHECKED	APPROVED	DRAWING NO. D3391
DATE 05.09.27	TITLE 412 FLOAT SKIDTUBE	REV. C SHEET 2 OF 5 SCALE 1:10

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